

Applicants : Yingru Wu, et al.
Serial No. : 10/594,785
Filed : September 17, 2007
Page 2 of 19: January 31, 2011 Amendment in Response to
October 1, 2010 Office Action

Amendments to the Claims

Please amend the claims by replacing all prior listings of claims with the listing of claims below pursuant to 37 C.F.R. §1.121:

Listing of Claims:

1-116. (Cancelled)

117. (Currently amended) A method of increasing ~~altering~~-fibre initiation and/or elongation in a fibre producing plant comprising genetically manipulating the plant such that the production of a polypeptide comprising consecutive amino acids whose sequence is ~~at least 95% identical~~ to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38 is increased when compared to a wild-type fiber producing plant, ~~wherein the polypeptide is produced in the wild-type fiber producing plant at or around anthesis.~~

118. (Withdrawn-currently amended) A method of reducing ~~altering~~-fibre initiation and/or elongation in a fibre producing plant comprising genetically manipulating the plant such that the production of a polypeptide comprising consecutive amino acids whose sequence is ~~at least 95% identical~~ to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38 is reduced when compared to a wild-type fiber producing plant, ~~wherein the polypeptide is produced in the wild-type fiber producing plant at or around anthesis.~~

119. (Previously presented) The method of claim 117 or 118,

Applicants : Yingru Wu, et al.
Serial No. : 10/594,785
Filed : September 17, 2007
Page 3 of 19: January 31, 2011 Amendment in Response to
October 1, 2010 Office Action

wherein the polypeptide comprises consecutive amino acids whose sequence is set forth in SEQ ID NO: 12.

120. (Currently amended) The method of claim 117, wherein the genetic manipulation comprises exposing the plant to a vector which comprises a nucleotide sequence encoding a polypeptide comprising consecutive amino acids whose sequence is ~~at least~~ 95% identical to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38.

121. (Withdrawn) The method of claim 118, wherein the genetic manipulation comprises exposing the plant to an antisense polynucleotide or a catalytic polynucleotide which hybridizes to an mRNA molecule encoding the polypeptide, and/or exposing the plant to a dsRNA molecule that specifically down-regulates levels of an mRNA molecule encoding the polypeptide, such that the level of the polypeptide produced by the plant is reduced.

122. (Withdrawn-currently amended) The method of claim 121, wherein the genetic manipulation is exposing the plant to the dsRNA molecule and the dsRNA molecule is double-stranded over at least 19 basepairs whose sequence corresponds to a consecutive sequence set forth in SEQ ID NO: 38, or to a consecutive sequence which is ~~at least~~ 95% identical to the sequence set forth in SEQ ID NO: 38.

123. (Previously presented) The method of claim 117 or 118, wherein the plant is a species of the Genus *Gossypium*.

Applicants : Yingru Wu, et al.
Serial No. : 10/594,785
Filed : September 17, 2007
Page 4 of 19: January 31, 2011 Amendment in Response to
October 1, 2010 Office Action

124. (Withdrawn-currently amended) A process of assessing the potential of a fibre producing plant to produce fibre, the process comprising analyzing whether the plant has for a genetic variation in a polynucleotide comprising a whose sequence is at least 95% identical to the nucleotide sequence set forth in SEQ ID NO: 38, wherein the polynucleotide is produced in a wild-type fibre producing plant at or around anthesis, and/or analyzing whether the plant for a genetic variation in is capable of expressing a polypeptide comprising an amino acid sequence which is at least 95% identical to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38.

125. (Withdrawn) The method of claim 124, wherein the polypeptide comprises consecutive amino acids whose sequence is set forth in SEQ ID NO: 12.

126. (Withdrawn-currently amended) A substantially purified and/or recombinant polypeptide selected from the group consisting of+

i) a polypeptide comprising consecutive amino acids whose sequence is set forth in SEQ ID NO: 12, ~~and~~

ii) ~~a polypeptide comprising consecutive amino acids whose sequence is at least 95% identical to the amino acids sequence set forth in SEQ ID NO: 12.~~

127. (Currently amended) An isolated and/or exogenous polynucleotide comprising a polynucleotide selected from

Applicants : Yingru Wu, et al.
Serial No. : 10/594,785
Filed : September 17, 2007
Page 5 of 19: January 31, 2011 Amendment in Response to
October 1, 2010 Office Action

the group consisting of:

i) a polynucleotide comprising consecutive nucleotides whose nucleotide sequence is set forth in SEQ ID NO: 38; and

~~ii) a polynucleotide comprising consecutive nucleotides whose sequence is at least 95% identical to the nucleotide sequence set forth in SEQ ID NO: 38;~~

~~iii) a polynucleotide which encodes a polypeptide comprising consecutive amino acids whose sequence is at least 95% identical to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38; and~~

~~iv) a polynucleotide which hybridizes to any one of i) to iii), under high stringency conditions.~~

128. (Withdrawn-currently amended) A polynucleotide which is:

i) a catalytic polynucleotide capable of cleaving a polynucleotide whose sequence is ~~at least 95%~~ identical to the nucleotide sequence set forth in SEQ ID NO: 38, or

ii) a dsRNA molecule comprising a polynucleotide which is double-stranded over at least 19 basepairs whose sequence corresponds to a consecutive sequence set forth in SEQ ID NO: 38, or to a consecutive sequence which is ~~at least 95%~~ identical to the

Applicants : Yingru Wu, et al.
Serial No. : 10/594,785
Filed : September 17, 2007
Page 6 of 19: January 31, 2011 Amendment in Response to
October 1, 2010 Office Action

sequence set forth in SEQ ID NO: 38.

129. (Previously presented) A vector comprising or encoding the polynucleotide of claim 127.
130. (Withdrawn) A vector comprising or encoding the polynucleotide of claim 128.
131. (Currently amended) A ~~host~~ plant or bacterial cell comprising the vector of claim 129.
132. (Withdrawn) A host cell comprising the vector of claim 130.
133. (Previously presented) A transgenic plant, the plant having been transformed with the polynucleotide of claim 127.
134. (Withdrawn) A transgenic plant, the plant having been transformed with the polynucleotide of claim 128.
135. (Currently amended) The transgenic plant of claim 133, which when compared to an isogenic non-transgenic plant, produces a modified level of a polypeptide comprising consecutive amino acids whose sequence is ~~at least 95%~~ identical to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38.
136. (Previously presented) The transgenic plant of claim 135, wherein the polypeptide comprises consecutive amino acids whose amino acid sequence is set forth in SEQ ID NO:12.

Applicants : Yingru Wu, et al.
Serial No. : 10/594,785
Filed : September 17, 2007
Page 7 of 19: January 31, 2011 Amendment in Response to
October 1, 2010 Office Action

137. (Currently amended) [[The]] A transgenic seed of the plant of claim 133.

138. (Withdrawn-currently amended) [[The]] A transgenic seed of the plant of claim 134.

139. (Previously presented) A process for producing fibre comprising obtaining the transgenic plant of claim 133 so as to thereby produce the fibre.

140. (Withdrawn-currently amended) A process of breeding a fibre producing plant having a polypeptide comprising consecutive amino acids whose sequence is ~~at least 95%~~ identical to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38, the process comprising analyzing the plant for a genetic variation in a polynucleotide whose sequence is ~~at least 95%~~ identical to the nucleotide sequence set forth in SEQ ID NO: 38, and/or analyzing the plant for a genetic variation in a polypeptide which is ~~at least 95%~~ identical to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38, and breeding the fibre producing plant.

141. (Withdrawn-currently amended) A process of selecting from a breeding population a fibre producing plant with altered fibre initiation and/or elongation potential, the method comprising:

- i) crossing two plants which have differing potential to produce fibre so as to produce

Applicants : Yingru Wu, et al.
Serial No. : 10/594,785
Filed : September 17, 2007
Page 8 of 19: January 31, 2011 Amendment in Response to
October 1, 2010 Office Action

progeny plants,

- ii) performing on the progeny plants a process comprising analyzing the plant for a genetic variation in a polynucleotide whose sequence is ~~at least 95%~~ identical to the nucleotide sequence set forth in SEQ ID NO: 38, and/or analyzing the plant for a genetic variation in a polypeptide whose amino acid sequence ~~which~~ is ~~at least 95%~~ identical to the amino acid sequence encoded by the nucleotide sequence set forth in SEQ ID NO: 38, and
- iii) selecting a progeny plant with altered fibre initiation and/or elongation potential when compared to a parent plant.

142. (Withdrawn-currently amended) A process for identifying an agent which reduces ~~alters~~ fibre initiation and/or elongation of a fibre producing plant, the method comprising:

- i) exposing a polynucleotide comprising consecutive nucleotides whose sequence is ~~at least 95%~~ identical to the nucleotide sequence set forth in SEQ ID NO: 38 to a candidate agent, and
- ii) assessing the ability of the candidate agent to hybridize and/or-cleave the polynucleotide.